

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A mobile communication terminal comprising:  
means for receiving identification information from at least one mini-communicator  
which transmits predetermined identification information of its own;  
means for communicating with a server or another terminal via a cellular  
communication network; and  
means for receiving from the server a switching signal including control information  
configured to control switching among a plurality of modes comprising an identification  
information receive mode activating only the means for receiving identification information,  
and a cellular communication mode activating only the means for communicating, and for  
performing a mode switching control based on the received switching signal.

Claims 2 (Previously Presented): The mobile communication terminal according to  
Claim 1, further comprising:

means for measuring a reception intensity of a radio wave received from the mini-  
communicator; and

means for generating transmission information to the server, which contains the  
identification information of the mini-communicator received from the mini-communicator,  
identification information of the mobile communication terminal, and the reception intensity  
of the radio wave from the mini-communicator, and for making the means for communicating  
transmit the generated transmission information to the server.

Claim 3 (Previously Presented): The mobile communication terminal according to  
Claim 2, further comprising:

means for acquiring traffic information in the cellular communication network; and

means for receiving and temporarily storing the transmission information from the means for generating, and for performing such an operation control as to output the transmission information to the means for communicating or store the transmission information, based on the traffic information in the cellular communication network acquired by the means for acquiring.

Claim 4 (Previously Presented): The mobile communication terminal according to Claim 2, further comprising:

a means for receiving and temporarily storing the transmission information from the means for generating; and

means for selecting transmission information to be outputted, from the transmission information stored in the means for receiving and temporarily storing, based on condition information containing at least a thinning condition for transmission information or a selection condition for transmission information to be outputted or to avoid output, and for outputting the transmission information to be outputted, to the means for communicating.

Claim 5 (Previously Presented): The mobile communication terminal according to Claim 2, wherein the means for generating comprises:

means for memorizing an identification number of a mini-communicator which the mobile communication terminal was able to receive at a past point of time;

means for comparing identification information of a mini-communicator which the mobile communication terminal is able to receive at the present time, with the identification number of the mini-communicator memorized, thereby determining whether there is a difference; and

means for making the means for communicating transmit the transmission information to the server, in a predetermined case where it is determined at least once that there is a difference.

Claim 6 (Previously Presented): The mobile communication terminal according to Claim 1, further comprising:

means for measuring a reception intensity of a radio wave received from the mini-communicator;

means for receiving from another mobile communication terminal, other terminal information containing the identification information of the mini-communicator, the reception intensity of the radio wave from the mini-communicator, and location information of the other mobile communication terminal; and

means for estimating the location of the mini-communicator corresponding to the transmission information, based on the reception intensity of the radio wave from the mini-communicator, measured by the means for measuring of the mobile communication terminal, and on the other terminal information, and for notifying the server of the estimated location information.

Claim 7 (Previously Presented): The mobile communication terminal according to Claim 1, further comprising means for amplifying a transmitted or received radio wave of the cellular communication network communicable with the mobile communication terminal, to relay the radio wave.

Claim 8 (Previously Presented): The mobile communication terminal according to Claim 1, wherein the means for communicating is configured to:

set a transmission/reception channel for transmission/reception of the transmission information, separately from a user channel for transmission/reception of user data and a control channel for transmission/reception of a control signal, in communication via the cellular communication network, and transmit the transmission information through the use of the transmission/reception channel.

Claim 9 (Previously Presented): A server capable of communication with at least one mobile communication terminal having means for receiving identification information from at least one mini-communicator, and means for communicating with a server or another terminal via a cellular communication network, the server comprising:

means for transmitting to the mobile communication terminal a switching signal according to a predetermined mode switching request, in order to implement switching among a plurality of modes comprising an identification information receive mode activating only the means for receiving identification information, and a cellular communication mode activating only the means for communicating, at the mobile communication terminal;

a mini-communicator location database configured to store location information of at least one mini-communicator;

a terminal location database configured to store location information of at least one mobile communication terminal; and

means for estimating a location of a mini-communicator corresponding to transmission information, based on transmission information from said mobile communication terminal containing identification information of a mini-communicator which a mobile communication terminal received from said mini-communicator, identification information of said mobile communication terminal, and a reception intensity of a radio wave from said mini-communicator, the pre-stored location information of the mini-communicator, and the pre-stored location information of the mobile communication terminal, and for updating the mini-communicator location database by the estimated location information.

Claim 10 (Cancelled)

Claim 11 (Previously Presented): The server according to Claim 9, further comprising:

a mini-communicator location database configured to store location information of at least one mini-communicator; and

means for receiving location information of a mini-communicator estimated and notified of by a mobile communication terminal, and for updating the mini-communicator location database by the received location information.

Claim 12 (Previously Presented): A communication system comprising at least one mini-communicator configured to transmit predetermined identification information of its own; a server capable of being connected to a cellular communication network; and at least one mobile communication terminal functioning as an aggregation point for aggregating information from the mini-communicator;

wherein the mobile communication terminal comprises:

means for receiving the identification information from the mini-communicator;

means for communicating with the server or another terminal via the cellular communication network; and

means for receiving from the server a switching signal including control information configured to control switching among a plurality of modes comprising an identification information receive mode activating only the means for receiving identification information, and a cellular communication mode activating only the means for communicating, and for performing a mode switching control based on the received switching signal;

wherein the server comprises:

means for transmitting a switching signal according to a predetermined mode switching request to the mobile communication terminal; and

wherein the means for receiving a switching signal of the mobile communication terminal performs the mode switching control based on the switching signal received from the server.

Claim 13 (Previously Presented): The communication system according to Claim 12, said communication system further comprising a cellular network management apparatus including:

- means for monitoring a state of the cellular communication network;
- means for memorizing class information defined for each mobile communication terminal or for each user of the mobile communication terminal;
- means for accepting a user request about the mode switching control; and
- means for generating a mode switching signal based on at least one of the class information acquired from the means for memorizing, the state information of the cellular communication network acquired in monitoring by the means for monitoring, and the user request accepted by the means for accepting, and for transmitting the switching signal to the mobile communication terminal;

wherein the means for receiving a switching signal of the mobile communication terminal performs the mode switching control based on the switching signal received from the cellular network management apparatus.

Claim 14 (Previously Presented): The communication system according to Claim 12, wherein the server further comprises:

- means for generating a reference time as a reference of time stamp and transmitting the reference time to the mobile communication terminal, and
- wherein the mobile communication terminal further comprises:
  - means for measuring time; and
  - means for calculating a difference between the reference time transmitted from the server, and a measured time, and for outputting the value of calculated difference as a time stamp.

Claim 15 (Previously Presented): The communication system according to Claim 12, wherein at least one of the mobile communication terminal and the server further comprises means for authenticating whether a mini-communicator is a qualified one.

Claim 16 (Previously Presented): A communication control method in a communication system comprising at least one mini-communicator configured to transmit predetermined identification information of its own, a server capable of being connected to a cellular communication network, and at least one mobile communication terminal functioning as an aggregation point for aggregating information from the mini-communicator, the communication control method comprising:

receiving at a mobile communication terminal from the server a switching signal including control information configured to control switching among a plurality of modes comprising an identification information receive mode activating only means for receiving the identification information from the mini-communicator and a cellular communication mode activating only a means for communicating, at the mobile communication terminal; and performing a mode switching control based on the received switching signal.

Claim 17 (Previously Presented): The communication control method according to Claim 16, further comprising:

measuring a reception intensity of a radio wave received from the mini-communicator, at the mobile communication terminal;

generating transmission information to the server, which contains the identification information of the mini-communicator received from the mini-communicator, identification information of the mobile communication terminal, and the reception intensity of the radio wave from the mini-communicator, at the mobile communication terminal;

transmitting the generated transmission information to the server, at the mobile communication terminal; and

estimating a location of a mini-communicator corresponding to the transmission information, based on the received transmission information, pre-stored location information of the mini-communicator, and pre-stored location information of the mobile communication terminal, at the server.

Claim 18 (Previously Presented): The communication control method according to Claim 17, wherein the generating includes:

comparing an identification number of a mini-communicator which the mobile communication terminal was able to receive at a past point of time, with identification information of a mini-communicator which the mobile communication terminal is able to receive at the present time, to determine whether there is a difference; and

producing the transmission information, in a predetermined case where it is determined at least once that there is a difference.

Claim 19 (Previously Presented): The communication control method according to Claim 16, further comprising:

measuring a reception intensity of a radio wave received from the mini-communicator, at the mobile communication terminal;

receiving from another mobile communication terminal, other terminal information containing identification information of a mini-communicator, a reception intensity of a radio wave from said mini-communicator, and location information of the other mobile communication terminal, at the mobile communication terminal; and

estimating a location of the mini-communicator corresponding to transmission information, based on the reception intensity of the radio wave from the mini-communicator, which was measured at the mobile communication terminal, and on the other terminal information, at the mobile communication terminal.



Claim 20 (Currently Amended): A recording medium including communication control program instructions to be executed by a computer in a mobile communication terminal comprising means for receiving identification information from at least one mini-communicator configured to transmit predetermined identification information of its own, and means for communicating with a server or another terminal via a cellular communication network, the communication control program causes the computer to execute a method comprising:

receiving from the server a switching signal including control information configured to control switching among a plurality of modes comprising an identification information receive mode activating only the means for receiving identification information, and a cellular communication mode activating only the means for communicating; and  
performing a mode switching control based on the received switching signal.